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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,196	01/23/2002	Gary G. Podrebarac	CDT 1746	5079

7590 07/31/2003

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EXAMINER

DANG, THUAN D

ART UNIT	PAPER NUMBER
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1764

7

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application N

10/055,196

Examiner

Thuan D. Dang

Applicant(s)

PODREBARAC ET AL.

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- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Election/Restriction*

Applicant's election with traverse of group I (claims s 1-6) in Paper No. 7/17/03 is acknowledged. The traversal is on the ground(s) that in light of Ochiai, 37 USPQ2d 1127 (fed. Cir. 1995). Applicants elected group I with traverse and subject to rejoinder the non-elected process claims. This argument is inappropriate since Ochiai case law is applied to a product and a process of use of the same product. Applicants also argue that subclass 16 is composition not process as classified by the examiner. This argument is also inappropriate since each of these two groups clearly requires different steps to produce different products (one is classified to class 585, the other belong to 208) The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cosyns et al (6,333,442) in view of Umemura et al (3,895,049).

Cosyns discloses a process including all steps as recited in claim 1 (the abstract) except that Cosyns is silent as to using a starting feed (C4 catalytic cracking fraction) also containing butadiene and mercaptans and a step of removing butadiene and mercaptans. However, Umemura discloses a C4 feed produced by catalytic cracking process and also containing butadiene and mercaptans (col. 1, lines 11-29; col. 4, line 62 thru col. 5, lines 15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Cosyns process by using the Umemura C4 hydrocarbon feed since it is expected that using any feed containing C4 hydrocarbons (catalytic cracking fraction) participating the reaction steps of Cosyns' process would yield similar results.

Once, such a feed is obviously used for the Cosyns' process, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Cosyns' process by removing these mercaptans and butadiene before the process since it is clear that Cosyns do not disclose that butadiene and mercaptan are present in his production steps.

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The catalyst of the alkylation step can be found on col. 5, lines 17-19.

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cosyns et al (6,333,442) in view of Umemura et al (3,895,049) further in view of Hearn (5,510,568).

Cosyns and Umemura disclose a process as discussed above.

Cosyns does not disclose to remove butadiene and mercaptans from the C4 catalytic cracking fraction by a method as called for in claim 2 and the first step of claim 6. However, Hearn discloses to remove these by such a method (the abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Cosyns process by using the Hearn method to remove the diolefins and mercaptans since both of undesired impurities can be simultaneously removed (see the abstract of Hearn).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 703-305-2658. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

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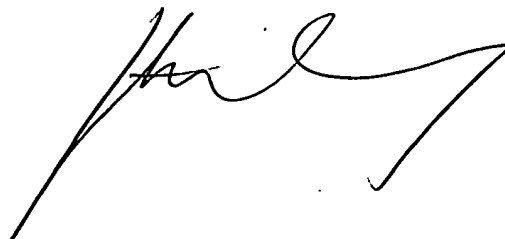
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Thuan D. Dang  
Primary Examiner  
Art Unit 1764

10055196.1st  
July 27, 2003

A handwritten signature in black ink, appearing to be 'Thuan D. Dang', written in a cursive style.